

containing the XAD-8 adsorbent. The process of *adsorption* is different from filtration. The molecules of the contaminant are adsorbed to the surface of the matrix (XAD-8) and removed from the water. Subsequently, these molecules are eluted from the matrix and passed through a complex analytical apparatus. The device of the present invention combines the filtration column in the centrifuge, so concentration and filtration occurs simultaneously and the particles trapped in the filter can be eluted and examined microscopically after the main filtration process. This allows for great economy of time and material.

Claims 1, 4, 6-8 and 10-13 have been rejected as being obvious over Whitmore (Wat. Sci. Tech. 1993) in view of U.S. Pat. No. 5,019,497. This rejection is traversed for the following reasons.

Whitmore and Carrington compare a variety of methods for the removal and identification of *Cryptosporidium* oocysts. They clearly state in the abstract that the Membrex standard method of removing *Cryptosporidium* oocysts consisted of passing large volumes of water through cartridge filters, but this was tedious and recoveries were only of the order of 30-40%. They tried a continuous centrifuge with very low recovery because they did NOT incorporate the filter within the centrifuge itself, hence very poor recovery was made compared with the present invention. Whitmore and Carrington experimented with several other systems and showed the value of cross-flow filtration. This technique is complex and expensive to operate. In contrast, the device and method of the present invention is simple and inexpensive, and does not resemble the system of Whitmore and Carrington.

Claims 1, 4, 6-8 and 10-13 have been rejected as being obvious over Borschardt (U.S. Pat. No. 5,846,439) in view of Leu (U.S. Pat. No. 5,866,071). This rejection is traversed for the following reasons.

Borchardt and Leu both deal with small quantities of fluid and in the examples demonstrated by the work of Contant-Poussard et al. (2000) deal with highly sophisticated laboratory methods to separate microorganisms that are one tenth to one one hundredth the size of *C. parvum* oocysts. Although all of the techniques use filtration techniques of one sort or another, the discussion dealing with molecular sieves

and atomic separation is completely irrelevant. Applicants do not dispute that there are numerous ways to filter particles, and even color filters to separate particles of light (photons). However, the cited references deal with small volumes of liquid, at most 5-10 ml, whereas the apparatus of the invention can process, centrifuge and filter 25-50 liters of water in 20-30 minutes at a cost of pennies. The difference in price between Sephadex and the glass particles is enormous. 100 gm of sephadex or dextran costs approximately \$30-50, the same cost as 50 kilograms of the material used in the apparatus of the present invention.

For all of the above reasons, it is respectfully submitted that the pending claims are neither anticipated by nor obvious in view of the cited references. Reconsideration and withdrawal of the 35 USC §102 and 35 USC §103 rejections are respectfully requested.

If any fees are required in the submission of this Amendment, please charge any such fees to our Deposit Account No. 22-0261.

Respectfully submitted,

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